

---

## Keyboard dialling

---

Keyboard dialing is an interactive dialogue mode between the connected equipment and the DAC. This dialogue allows equipment to give dialing commands to the DAC in order to make a data call to another far-end data port. Keyboard dialing supports a modify mode that allows the user to modify certain dialing parameters.

The following keyboard dialing features are supported with the DAC:

- Autobaud from 110 to 19200 bps
- Autoparity to ensure that the keyboard dialing menu is readable on the data terminal during the interactive dialogue mode
- Originating calls to local and remote hosts
- Ring Again
- Speed Call
- Two answer modes for incoming calls: manual and auto
- Digit display
- Dialing by mnemonic

### Initiating conditions

In order for the DAC to respond to user commands/entries, the following conditions must be met:

- The DAC must be active (power ON), and have successfully received the downloaded parameters from the system.

- The user equipment must be active, and, if in RS-232-C mode, must assert these control lines
  - DCE mode: DTR (unless Forced DTR has been software selected)
  - DTE mode: RI has cycled the appropriate number of times

## Echo

During call setup (dialogue phase), all user input is echoed back to the user equipment. Once the call is established, the DAC is transparent to data communications. To get echoed characters after a call is established, the far end must provide the echo.

**Note:** When RS-232-C modes 12-15 (Host modes) are selected, there is no echo during dialogue phase.

## Prompts

Call processing prompts are in upper case letters only. Other prompts consist of both upper and lower case characters, and the dialogue session depicts the actual upper/lower case letters used.

All prompts are preceded by the Carriage Return and Line Feed ASCII characters (<CR>, <LF>).

Prompts requesting user input are terminated with the ASCII colon (:).

Prompts requiring a Yes or No answer are terminated by a question mark (?), followed by a list of allowable responses. The default response, if allowed, is bracketed.

## Call abort

In addition to the methods mentioned above, which are common to both Hayes and keyboard modes, keyboard dialing supports the following method to abort a call during the dialogue phase.

- Sending the Control Z character (simultaneously pressing the control and Z keys) sends a message to the DAC to immediately abandon the data call setup.

## Autobaud

All user dialogue must begin with Autobaud detection. This allows the DAC to determine the user equipment baud rate. During this phase, only <CR> will be recognized by the DAC. All other entries are ignored, and no entries are echoed. Once a valid <CR> is detected, the DAC responds with the New Menu prompt at the baud rate detected. If a fixed rate has been determined by the downloaded parameters, the DAC will look for that rate. If the rates agree, the dialogue phase begins. If not, the following prompt is sent to the user:

### **Baud Rate xxxx expected**

After receiving a number of invalid responses, the DAC reverts to autobaud detection, since the terminal data speed may have changed.

Keyboard Autobaud is allowed after the call is placed in off-line mode.

*Note:* If the Hayes autobaud characters A or a are sent, the DAC will enter Hayes dialing mode. Autobaud character detection is selected in the software.

## Auto parity

The user can override the downloaded parity rate by entering the ASCII period (.) as a command. This period must be the only command sent, followed by <CR>. The period must be sent only when the Primary menu is displayed, and can be sent only once during a call setup session.

## Dialing operation

For the purposes of this document, when illustrating the prompt/response sequences, the bold type is what the user enters on the keyboard. All other type represents the DAC output. Likewise, "xxxxxxx," "yyyyyy," or "zzzzzz" represents numbers entered by the user, or dialed by the DAC, and in no way indicates the absolute character limit. A maximum of 43 characters is allowed.

When the user enters the autobaud character, <CR>, and the dialing mode is Manual (not Hotline), the DAC sends the following menu:

<CR><LF><CR><LF><LF>ENTER NUMBER OR H (FOR HELP):<SP>

If the user enters <CR>, the DAC presents this prompt again. When a number is entered, the DAC attempts to place the call. Entering H at this point will list the Primary Commands menu:

Primary Commands Menu:

A - Auto Dial            C - Call  
D - Display            M - Modify  
S - Speed Call  
CTRL Z (Abort Keyboard Dialing)  
Select: <SP>

Whenever a Primary command is expected, the user may enter the Parity command (period). If Auto Parity has already been done, the Invalid Command menu is presented:

Invalid Command/Entry  
Re-Enter: <SP>

The user's port may be set to idle by entering CTRL Z. Any call in progress will be dropped, and any Ring Again placed will be released. Once the Primary Command menu has appeared, the user must enter C to place a call. The DAC will not accept a number in place of a Primary command.

## Primary commands

Once the Primary menu has appeared, only primary commands are accepted.

### Call (C)

The Call command must be used to place a call once the Primary menu has appeared. The DAC will not accept a number only.

**C<CR>**

ENTER NUMBER:<SP>

**xxxxxxx<CR>**

CALLING xxxxxxxx  
RINGING  
ANSWERED  
CALL CONNECTED. SESSION STARTS

**Autodial (A)**

The Autodial command allows the user to dial a predefined number stored within the local system. The DAC will automatically attempt to place a data call to the Autodial number:

**A <CR>**

CALLING xxxxxxxx

RINGING

ANSWERED

CALL CONNECTED. SESSION STARTS

The currently stored Autodial number may be viewed by entering the primary command D (Display), followed by the selection A (Autodial). See the Display discussion later in this document.

*Note:* If the Autodial feature key is not defined in the software you will be notified by the following: Feature key Autodial not defined.

**Speed Call (S)**

The Speed Call command allows the user to make a call to a number associated with a 1-, 2-, or 3-digit access code. The user supplies the access code, and the DAC places the call according to the code supplied.

**S<CR>**

ENTER ACCESS CODE: <SP>

**xxx<CR>**

CALLING yyyyyy

RINGING

ANSWERED

CALL CONNECTED. SESSION STARTS

If the DAC does not know the access code length, you will be notified by: ENTER ACCESS CODE (all digits) <SP>. Leading zeroes must be entered if the access code is less than the maximum number of digits allowed for the Speed Call list for the associated data DN (DDN).

**Note:** If the Speed Call feature key is not defined in the software, you will be notified by the following: Feature key Speed Call not defined.

Both the Autodial and Speed Call commands can be changed with the Modify command (M). Additionally, the Speed Call number can be changed in the service change. When this command is entered, the Modify menu appears.

Modify Menu:

|                                 |                     |
|---------------------------------|---------------------|
| A - Auto Number                 | D - DCD Control     |
| L - Long Break                  | M - Manual Answer   |
| Q - Quit Modify Menu            | R - Remote Loopback |
| S - Speed Call                  |                     |
| CTRL Z (Abort Keyboard Dialing) |                     |
| Select:<SP>                     |                     |

Any of these choices leads to another series of prompts and responses.

By entering A on the keyboard, you enter the Autodial Modify menu. Respond to the following prompts to change the Autodial number.

**A <CR>**

Current Autodial number: zzzzzzz

Enter Autodial number: <SP>

**xxxxxxx <CR>**

New Autodial number: xxxxxxx

By entering S on the keyboard, you enter the Speed Call Modify menu. The Speed Call number can also be changed in the software. Respond to the following prompts to change the Speed Call number.

**S<CR>**

Enter access code <SP>

Current Speed Call number: zzzzzzz

Enter Speed Call number: <SP>

**zzzzzzz<CR>**

New Speed Call number: xxxxxxx

By entering R on the keyboard, you enter the Remote Loopback Modify menu. Respond to the following prompts to enable or disable the Remote Loopback feature.

**R <CR>**

Remote Loopback Disabled (or enabled, indicating current status)

Remote Loopback  
(Y/N): <SP>

**Y <CR> or N <CR>**

Remote Loopback: Enabled (or Disabled)

By entering M on the keyboard, you enter the Manual Answer Modify menu. Manual Answer indicates that the DAC prompts the user to answer an incoming data call. Auto answer picks up the call after the specified number of rings. Respond to the following prompts to enable or disable the Manual Answer feature.

**M <CR>**

Current Answer Mode: Manual  
Auto - xx Rings

Manual Answer? (Y/N): <SP>

**Y <CR>**

**N <CR>**

Number of rings (1-255 <1>): <SP>

**yy**

New Answer Mode: Manual New Answer Mode: Auto - yy Rings

By entering D on the keyboard, you enter the DCD Modify menu. Respond to the following prompts to enable DCD as Forced or Dynamic.

**D <CR>**

DCD Control: Dynamic  
Forced On

Dynamic DCD? (Y/N): <SP>

**Y <CR>**

**N <CR>**

DCD Control: Dynamic

DCD Control: Forced On



By entering L on the keyboard, you enter the Long Break Detect Modify menu. Respond to the following prompts to enable or disable the detection of the Long Break as an abandon signal.

**L <CR>**

Long Break:   Detected  
                  Ignored

Detect Long Break? (Y/N): <SP>

**Y <CR>**

Long Break: Detected

**N <CR>**

Long Break: Ignored

To exit the Modify menu, enter Q. This entry returns you to the Primary commands menu. To view the port's parameters, enter D when in the Primary Commands menu. This display shows the Display Options menu.

Display Options Menu:

|                                 |                          |
|---------------------------------|--------------------------|
| A - Auto Dial number            | D - Date and Time        |
| K - Feature Keys                | P - Data Port Parameters |
| Q - Quit Display                | S - Speed Call number(s) |
| CTRL Z (Abort Keyboard Dialing) |                          |
| Select: <SP>                    |                          |

## Ring Again

When a call is placed to a busy DN, the DAC prompts you to activate Ring Again. The Ring Again feature alerts you as soon as the dialed DN becomes free. Once the Ring Again has been activated, you will return to the Primary Commands menu. The following is the prompt and response sequence enabling the Ring Again feature.

**Note:** If you hang up the call, or give an abandon command, Ring Again is canceled.

BUSY, RING AGAIN? (Y/N): <SP>

**Y <CR>**      or      **N <CR>**

RING AGAIN PLACED

Primary Commands Menu:

A - Auto Dial                      C - Call  
D - Display                      M - Modify  
S - Speed Call  
CTRL Z (Abort Keyboard Dialing)  
Select: <SP>

If a Ring Again request has already been placed, the DAC offers the option of overriding the previous request.

RING AGAIN ACTIVE, REPLACE? (Y/N): <SP>

**Y <CR>**

RING AGAIN PLACED

Primary Commands Menu:

A - Auto Dial                      C - Call  
D - Display                      M - Modify  
S - Speed Call  
CTRL Z (Abort Keyboard Dialing)  
Select: <SP>

When the called DN becomes available, the system notifies the DAC, which then prompts the user to place the call. If you do not respond to the Ring Again prompt within a software determined time period, Ring Again is canceled, and the Primary Commands Menu appears.

DATA STATION NOW AVAILABLE, PLACE CALL? (Y/N/<Y>): <SP>

**Y <CR>**

CALLING XXXX  
RINGING  
ANSWERED  
CALL CONNECTED. SESSION STARTS

**Note 1:** If the Ring Again notice occurs during a parameter change, the prompt only appears after the change has been completed.

**Note 2:** If the notice occurs during an active call, the Ring Again notice is ignored. When the active call is completed, you will be notified that the Ring Again call was canceled.

You can also cancel the Ring Again request at this time.

DATA STATION NOW AVAILABLE, PLACE CALL? (Y/N/[Y]): <SP>

**N <CR>**

RING AGAIN CANCELLED

Primary Commands Menu:

|                                 |                |
|---------------------------------|----------------|
| A - Auto Dial                   | S - Speed Call |
| C - Call                        | M - Modify     |
| D - Display                     |                |
| CTRL Z (Abort Keyboard Dialing) |                |
| Select: <SP>                    |                |

## Not in service

When the DAC attempts a call to a DN that is not supported, it sends you a message. The call is released, and you must reenter the Autobaud character <CR> to initiate keyboard dialing again.

**C<CR>**

ENTER NUMBER:<SP>

**xxxxxxx<CR>**

CALLING xxxxxxx

NOT IN SERVICE

RELEASED

## No response from the system

Likewise, when the DAC receives no system response from your port after a 30-second timeout period, the DAC sends you a message. The call is abandoned. This means the port is either disabled or unequipped.

**C<CR>**

ENTER NUMBER:<SP>

**xxxxxxx<CR>**

NO SYSTEM RESPONSE

RELEASED